

10/572,855**REMARKS**

This Amendment is filed in response to the final Office Action dated January 30, 2009. For the following reasons this amendment should be entered, the application allowed, and the case passed to issue. No new matter is introduced by this amendment and this amendment clearly places the application in condition for allowance. The amendment to claim 1 is supported by the specification at paragraph [0031] which teaches:

In laser peening, green light pulse-like laser rays, for example, are irradiated on the work piece in a liquid such as water and oil. Laser produces high pressure plasma on the surface of the work piece. Since the plasma is in the liquid, any abrupt expansion is repressed and a reaction force is generated as a result. The reaction force is transmitted to the work piece as a shockwave to cause a compression residual stress, which resultantly increases the surface hardness of the work piece.

Claims 1-35 are pending in this application. Claims 6-35 were withdrawn pursuant to a restriction requirement. Claims 1-5 were rejected. Claim 1 is amended in this response.

Election/Restriction

The restriction is traversed because it is improper, as explained in the response filed December 1, 2008. Contrary to the Examiner's assertions, the different groups do *not* lack unity of invention, and are linked so as to form a single inventive concept under PCT Rule 13.1. According to PCT Rule 13.1, the unity of invention requirements will be fulfilled if there is a technical relationship among the inventions involving one or more of the same or corresponding special technical features. There is such a technical relationship among the inventions in the present application. It is clear that the Examiner has ignored the unity of invention standard required when restricting an application filed under 35 U.S.C. § 371. Further, in the Examiner's explanation of the restriction in the January 30, 2009, the Examiner only compared Groups I and III, in a proper restriction requirement all groups must be compared against each other in order to

10/572,855

restrict the groups from each other. For example, the Examiner provided no justification as to why Groups I and II should be restricted under the unity of invention standard.

The Examiner noted that the restriction has been made final, and that Applicant can file a petition. Applicants thank the Examiner for the reminder that restriction decisions can be petitioned, and will consider doing so.

Claim Interpretation

The Examiner regarded the limitation "by means of applying a laser peening of irradiating said bridge side with a laser through a liquid" as being negligible, and cited an MPEP passage which allegedly supported this conclusion.

The Examiner's claim interpretation is traversed. There is nothing in the rules which teaches that a claim limitation can be considered negligible. In fact, claims must be considered as a whole, which includes considering all the limitations in a claim.

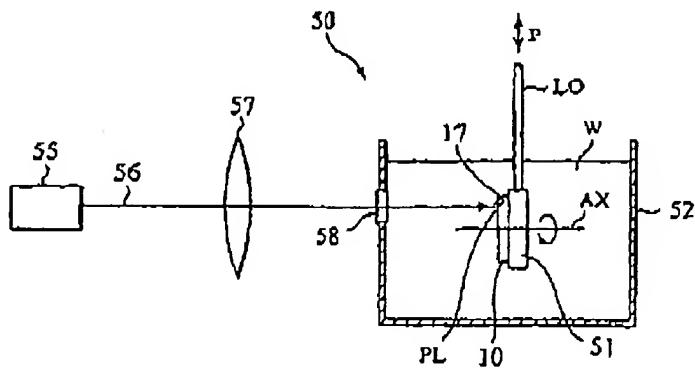
Claim Rejections Under 35 U.S.C. § 102

Claims 1-3 are rejected under 35 U.S.C. § 102(b) as being anticipated by US Pub. No. 2003/0201685 to Shimada et al. This rejection is traversed, and reconsideration and withdrawal thereof respectfully requested.

Shimada et al. do not anticipate the claimed rotor because Shimada et al. do not disclose a bridge side on an inner circumference of a magnet insertion window of the rotor, to which a laser peening of irradiating at an angle relative to the inner circumference of the magnet insertion window with a laser through a liquid has been applied, in which the bridge side is work hardened due to a compression residual stress added thereto, the compression residual caused by transmission of a shockwave resulting from a high pressure plasma produced over the bridge side by the laser, as required by claim 1.

10/572,855

Shimada et al. describe that the laser is orthogonally irradiated on the surface of an electrical steel sheet 10, as shown in Fig. 4 and explained in paragraph [0071], and depicted below. Therefore, a shock wave caused by the generation of plasma is directly transmitted to the area (surface) 17 and adds a compression residual stress to area 17. Thus, area 17 includes a compression residual stress.



According to claim 1, on the other hand, the laser is obliquely irradiated on the inner circumference of the magnet insertion window. The shock wave caused by the generation of plasma does not directly influence the surface of the rotor. Because the influence of laser peening on the surface of the rotor is restrained in the present invention, even where the rotor has an insulation layer on the surface thereof, deterioration of the insulation layer can be avoided. In other words, it is the inner circumference of the rotor of the present invention, not the surface, to which a compression residual stress is added. Thus, the product-by-process limitations of the present claims provide a rotor that is structurally different from the prior art. Therefore, the product-by-process limitations of the present claims are not negligible, and when the claims are considered as a whole, the claims are distinguishable over Shimada et al.

10/572,855

Furthermore, because the laser is irradiated on the inner circumference of the magnet insertion window from an oblique direction, it is possible to process a plurality of stacked rotors together, and thus improve productivity and efficiency while reducing the cost of the laser peening process. Thus, the rotors of the present invention can be produced at relatively lower cost. Shimada et al. do not disclose or suggest the radiating direction of the laser and stacking of a plurality of rotors.

The factual determination of lack of novelty under 35 U.S.C. § 102 requires the disclosure in a single reference of each element of a claimed invention. *Helifix Ltd. v. Blok-Lok Ltd.*, 208 F.3d 1339, 54 USPQ2d 1299 (Fed. Cir. 2000); *Electro Medical Systems S.A. v. Cooper Life Sciences, Inc.*, 34 F.3d 1048, 32 USPQ2d 1017 (Fed. Cir. 1994); *Hoover Group, Inc. v. Custom Metalcraft, Inc.*, 66 F.3d 399, 36 USPQ2d 1101 (Fed. Cir. 1995); *Minnesota Mining & Manufacturing Co. v. Johnson & Johnson Orthopaedics, Inc.*, 976 F.2d 1559, 24 USPQ2d 1321 (Fed. Cir. 1992); *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051 (Fed. Cir. 1987). Because Shimada et al. do not disclose a bridge side on an inner circumference of a magnet insertion window of the rotor, to which a laser peening of irradiating at an angle relative to the inner circumference of the magnet insertion window with a laser through a liquid has been applied, in which the bridge side is work hardened due to a compression residual stress added thereto, the compression residual caused by transmission of a shockwave resulting from a high pressure plasma produced over the bridge side by the laser, as required by claim 1, Shimada et al. do not anticipate claim 1.

Applicants further submit that Shimada et al. do not suggest the claimed rotor.

10/572,855

Claim Rejection Under 35 U.S.C. § 103

Claims 4 and 5 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Shimada et al. in view of US Pub. No. 2002/0114824 to Fukui et al. This rejection is traversed, and reconsideration and withdrawal thereof respectfully requested.

Dependent claims 4 and 5 are allowable for at least for the same reasons as independent claim 1, and further distinguish the claimed rotor. Fukui et al. do not cure the deficiencies of Shimada et al., as Fukui et al. do not suggest a bridge side on an inner circumference of a magnet insertion window of the rotor, to which a laser peening of irradiating at an angle relative to the inner circumference of the magnet insertion window with a laser through a liquid has been applied, in which the bridge side is work hardened due to a compression residual stress added thereto, the compression residual caused by transmission of a shockwave resulting from a high pressure plasma produced over the bridge side by the laser, as required by claim 1.

The dependent claims are allowable for at least the same reasons as claim 1 and further distinguish the claimed rotor.

In view of the above amendments and remarks, Applicants submit that this amendment should be entered, the application allowed, and the case passed to issue. If there are any questions regarding this Amendment or the application in general, a telephone call to the undersigned would be appreciated to expedite the prosecution of the application.

10/572,855

To the extent necessary, a petition for an extension of time under 37 C.F.R. § 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 500417 and please credit any excess fees to such deposit account.

Respectfully submitted,

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